

AMENDMENTS TO THE CLAIMS

1. (Original) A method for controlling coming and going personnel at a facility comprising the steps of:

ionizing air by a discharging device, the air has been contacted with a coming person who entered into a control area provided between outside and inside of the facility;

detecting the ionized air by a mass spectrometer as a molecular weight;

inputting the molecular weight into a control processor;

checking the molecular weight against molecular weights of dangerous substance which have been registered previously into said control processor to detect the molecular weight of dangerous substance in the air;

inputting a signal of the detected dangerous substance into a door driving controller; and

closing a door provided in the control area by operating said door driving controller to prohibit said coming person from entering the facility.

2. (Original) A system for controlling coming and going personnel at a facility comprising:

a control area provided between outside and inside of the facility;

doors provided in said control area;

a door driving controller for controlling operation of said doors; and

a mass spectrometer provided in said control area for ionizing air by a discharging device, the air been contracted with a coming person who entered into said control area, and detecting the ionized air as a molecular weight; wherein

said molecular weight is input into a control processor to check against molecular weights of dangerous substance, which have been registered previously into said control processor, in order to detect the molecular weight of dangerous substance in the air;

a signal of the detected dangerous substance in the air is input into a door driving controller; and

the door provided in a direction forward of the coming person is closed by operating said door driving controller.

3. (Original) A system for controlling coming and going personnel at a facility comprising:

a control area provided between outside and inside of the facility;

doors provided in said control area;

a door driving controller for controlling operation of said doors;

a person identification detector provided in said control area for identifying a personal identification means of a coming person; and

a mass spectrometer provided in said control area for ionizing air by a discharging device, the air has been contacted with a coming person who entered into said control area, and detecting the ionized air as molecular weight; wherein

said detected personal identification and said detected molecular weight are input into a control processor to check against personal identification and molecular

weights of dangerous substance, both of which have been registered previously into said control processor, in order to detect the molecular weight of dangerous substance in the air and the personal identification matching with the previously registered personal identification;

a danger signal of the detected dangerous substance in the air and an identification signal of the detected personal identification matching with the previously registered personal identification are input into said door driving controller, respectively;

said danger signal is input into said door driving controller prior to said identification signal, of which transmission is delayed by a delay element provided in said identification signal side, and

the door provided in a direction forward of the coming person is closed by operating said door driving controller.

4. (Original) A system for controlling coming and going personnel at a facility comprising:

a controller area provided between outside and inside of the facility;

doors provided in said control area;

a doors driving controller for controlling operation of said doors;

a palm shape detector provided in said control area for detecting a palm shape of a coming person; and

a mass spectrometer provided in said control area for ionizing air by a discharging device, the air has been contacted with said palm shape, and detecting the ionized air as a molecular weight; wherein

said palm shape and said detected molecular weight are input into a control processor to check against palm shapes and molecular weights of dangerous substances, both of which have been registered previously into said control processor, in order to detect the molecular weight of dangerous substance in the air and the palm shape matching with the previously registered palm shapes;

a danger signal of the detected dangerous substance in the air and a palm shape signal of the detected palm shape matching with the previously registered palm shapes are input into said door driving controller, respectively;

said danger signal is input into said door driving controller prior to said palm shape signal, of which transmission is delayed by a delay element provided in said palm shape signal side, and

the door provided in a direction forward of the coming person is closed by operating said door driving controller.

5. (New) A method for controlling coming and going personnel at a facility comprising:

identifying a personal identification of a coming person by a person identification detector provided in a control area between outside and inside of the facility;

ionizing air by a discharging device and detecting the ionized air as a molecular weight by a mass spectrometer provided in the control area;

inputting the detected personal identification and the detected molecular weight into a control processor to check against personal identification and molecular weights of dangerous substance, both of which have been registered previously into the

control processor, in order to detect the molecular weight of dangerous substance in the air and the personal identification matching with the previously registered personal identification; and

generating a danger signal when a dangerous substance is detected in the air and generating an identification signal when the detected personal identification is matched with the previously registered personal identification, and allowing the coming person to enter into the facility when no danger signal exists and an identification signal exists.

6. (New) A method for controlling coming and going personnel at a facility comprising:

identifying a person identification in a control area between outside and inside of the facility by detecting the hand of a coming person; and

ionizing air by a discharging device and detecting the ionized air as a molecular weight by a mass spectrometer provided in the control area, the mass spectrometer detecting the air in the vicinity of the hand of the coming person who entered into said control area,

inputting the detected personal identification and the detected molecular weight into a control processor to check against personal identification and molecular weights of dangerous substance, both of which have been registered previously into said control processor, in order to detect the molecular weight of dangerous substance in the air and the personal identification matching with the previously registered personal identification; and

generating a danger signal when a dangerous substance is detected in the air and generating an identification signal when the detected personal identification is matched with the previously registered personal identification and allowing the coming person to enter into the facility when no danger signal exists and identification signal exists.

7. (New) A method for controlling coming and going personnel at a facility comprising:

identifying a personal identification of a coming person by a person identification detector provided in a control area provided between outside and inside of the facility;

ionizing air by a discharging device and detecting the ionized air as a molecular weight by a mass spectrometer provided in the control area, the mass spectrometer detecting the air in the vicinity of hand of the coming person who entered into the control area;

inputting the detected personal identification and the detected molecular weight into a control processor to check against personal identification and molecular weights of dangerous substance, both of which have been registered previously into the control processor, in order to detect the molecular weight of dangerous substance in the air and the personal identification matching with the previously registered personal identification;

generating a danger signal when a dangerous substance is detected in the air and generating an identification signal when the detected personal identification is match with the previously registered personal identification are input into a door driving controller for controlling operation of an entrance door and an exit door provided in the control area, respectively;

inputting the danger signal into the door driving controller prior to the identification signal, of which transmission is delayed by a delay element provided in the identification signal side; and

closing the exit door provided in a direction forward of the coming person by operating the door driving controller.

8. (New) A method for controlling coming and going personnel at a facility comprising:

detecting a palm shape of a coming person with a palm shape detector provided in the control area;

ionizing air by a discharging device and detecting the ionized air as a molecular weight by a mass spectrometer provided in a control area provided between outside and inside of the facility, the mass spectrometer detecting the air in the vicinity of hand of the coming person who entered into said control area;

inputting said palm shape and said detected molecular weight into a control processor to check against palm shapes and molecular weights of dangerous substance, both of which have been registered previously into said control processor, in order to detect the molecular weight of dangerous substance in the air and the palm shape matching with the previously registered palm shapes;

generating a danger signal when a dangerous substance detected in the air and generating a palm shape signal when the detected palm shape is matched with the previously registered palm shapes are input into a door driving controller for controlling operation of an entrance door and an exit door provided in said control area, respectively;

inputting the danger signal into the door driving controller prior to said palm shape signal, of which transmission is delayed by a delay element provided in said palm shape signal side; and

closing the door provided in a direction forward of the coming person by operating the door driving controller.